

APPLICATION NUMBER 09/774,976

ATTORNEY DOCKET APP 1208

DECLARATION

37CFR 1.131

EXHIBITS I, II, III

Appl. No. 09/774,976

Attorney Docket APP 1208 US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of
R. V Martija et al
Appl. No. 09/774,976
Filed: January 31, 2001
Title: Method and System for Determining
Geographical Regions of Hosts in a Network
Art Unit: 2155
Examiner: David R. Lazaro

DECLARATION
37 C.F.R. 1.131

I, Ricardo V. Martija, of South Pasadena in the County of Los Angeles, and State of a California hereby declare and state that:

I am a co-inventor of the above identified patent application.

Prior to December 29, 2000, I and my co-inventors Dave Sincoskie and Sam Weerahandi were employed by Bell Communications Research (Bellcore), now after March 17, 1999 known as Telcordia Technologies, Inc., the assignee of this patent application, at their research facility in Morristown, N.J. At that time we were engaged in the research and development of a system and method for determining the geographical location of a host in a public communications network, such as the Internet. Specifically, prior to December 29, 2000, we conceived and successfully operated a system, known as "netsizer", which system is described in the above identified patent application.

To operate the system successfully it was necessary to collect data for triangulation purposes; we collected data from the University of Washington, the University of Virginia, and Illinois State University. The data we collected included the number of hops and traceroute time for each of these monitoring stations.

Prior to operating the system we sorted the classifiable data, i.e., those whose locations are known, from those that were unclassifiable. We then summarized the results of the classified ones (monitor.data) and computed the covariance matrices (monitor.data.covar). We then computed Mahalanobi's distance for the unclassified ones (unknown.data). The file with the distance computations is unknown.dbg.out, and the final output is in file unknown.out.

The data files are in the following path under my home directory and are currently in my possession:

rmartija/netsizer/data/tempdir/median/monitor.data
rmartija/netsizer/data/tempdir/median/monitor.datacovar
rmartija/netsizer/data/tempdir/median/unknown.data
rmartija/netsizer/data/tempdir/median/unknown.dbg.data
rmartija/netsizer/data./tempdir/median/unknown.out

Prior to December 2000 I wrote the program code for the operation of our system. That program code was set forth in program files in the following path also under my home directory and which are also currently in my possession:

rmartija/netsizer/scripts/getCovar.pl
rmartija./netsizer/scriptds/getHostLoc.pl
rmartija/netsizer/scripts/getHostDistByLoc.pl
rmartija/netsizer/scripts/getLocalHits.pl
rmartija/netsizer/scripts/getHitsByState.pl
rmartija/netsizer/scripts/run.classify
rmartija/netsizer/scripts/classify.pl

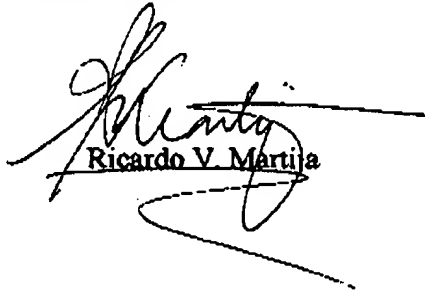
Attached hereto are printouts of program files "getCovar", Exhibit I, "getHostLoc", Exhibit II, and "classify", Exhibit III, showing the dates of May 25, 1999, May 20, 1999, and May 5, 1999, respectively, the dates when these specific program files were last modified.

These files and programs were employed by me and my associates including my co-inventors at Telcordia during numerous successful operations of our invention at the Morristown, N.J. facilities of my employer prior to December 2000. I operated our system to determine a geographical region of a host in a network using the triangulation data collected to define the selected other hosts in the network at a plurality of geographical regions by determining, at a plurality of points in the network, first sets of information associated with the selected other hosts and second sets of information associated with the host whose geographical region in the network is to be determined, and then determining that geographical region based on the geographical region of one or more of the selected other hosts whose respective means of first sets of information has a shortest weighted vector distance from the second sets of information.

More specifically, we used the traceroute program to collect time delay and number of hops information from each of the monitoring stations (UW, UVa, IllState, and Bellcore) to each of the IP addresses on our list. For some of these addresses we knew the geographical location while for the others we did not. For those IP addresses whose geographic location we knew, we determined their characteristics by computing their covariance matrices and Mahalanobi's distances based on the time delay and hops information collected. We also computed the covariance matrices and Mahalanobi's distances for those IP addresses whose geographical locations were unknown. We calculated the Mahalanobi's distance (which is a function of all distance related measures and their covariances) between a location-unknown host from location-known hosts and

assigned it to the locality of the location-known host having the minimum distance. "Triangulation" was used to determine where these unknown IP addresses would be most likely located.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States code, and that such willful statements may jeopardize the validity of the application or any patent issued thereon.



Ricardo V. Marti

Dated 10-21-2004